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PRINTERS:

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Shakespeare St., Richmond, E.I.
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.I., on or before the 8th of each month.

Subscription rate in Australia is 12/- per annum, in advance (post paid) and A15/- in all other countries.

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WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7145 Kc. and 2005 hours EST 90 and 144 Mc. No frequency checks available from VK3WI. Intrastrate working frequency, 7125 Kc.

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VK4WI: Sundays, 0800 hours EST, simultaneously on 3550 and 14342 Kc. 3560 Kc. channel is used from 0815 hours to 1015 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available.

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VK3WI: Sundays, 0830 hours WEST, on 7145 Kc. No frequency checks available.

VK3WI: Sundays, at 1000 hours EST, on 7145 Kc. and 148.25 Mc. No frequency checks are available.

Published by the Wireless Institute of Australia.

Law Court Chambers, 191 Queen Street,
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EDITORIAL



THE POWER OF A MEETING

Such are the ambiguities of English grammar that many words can have a multiplicity of meanings. The word "meeting" is a typical example, and yet, in a strange way, the dictionary explanations of this quite common word can all mean the same thing when applied to the meetings of our Institute.

A meeting of the Institute gives that great opportunity to "come face to face with" other people whom we have probably heard on the air time and time again; the chance to "reach out and touch or unite" with our fellow Amateurs; to "come together." "to assemble," "to be united" with people who have the same interests at heart; "to meet," sometimes for the first time, those of our fraternity we have always wanted to meet.

But in an Institute such as ours, this is not the only benefit we can derive from a "meeting"; it also affords a powerful liaison between the Society and its membership; it gives the membership the opportunity to let the Society know its individual problems, the opportunity to discuss individual problems between each other. It gives the Society the opportunity to do something about these problems.

A meeting does more than all the letter-writing in the world could do. It gives the necessary power to the membership and the Institute to discuss and resolve major problems that confront Amateur Radio.

The W.I.A. has major problems facing it all over the Commonwealth today, make no mistake about that! Major problems that must be faced up to by the membership and resolved in a manner that will be satisfactory to all—television interference, foreign encroachment into frequency channels expressly allocated to the Amateur Service, National and Civil Defence Emergency Networks and their co-ordination, W.I.A. representation on behalf of Region III at the next International Telecommunications Convention—all these things must be faced up to now, not when the crisis is reached!

By meeting each other and discussing these things amongst other interesting Amateur activities, by taking an interest in attending monthly meetings and other organised gatherings of Amateurs, by taking an interest in the administrative organisation behind your meeting and the Institute in general and regularly attending its functions, by giving a little of your spare time to the problems confronting the Institute—by all these things your hobby can endure for you and the generations of Amateurs to follow on in the years that yet lie ahead.

Will you attend your meetings and do your bit to protect the greatest hobby you will ever enjoy?

FEDERAL EXECUTIVE.

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TRANSMITTER CONTROL

BY R. M. WINCH,* VK2OA

Recently, the author took stock of his transmitter layout and decided that an overall plan was necessary.

To enable operation on any of the bands from 3.5 to 144 Mc., it is necessary to have at least three transmitters—one for each band would be the ideal, of course. However, operation on more than one band at a time was not envisaged so it was considered that it would be an expensive luxury to have separate power supplies, modulators, keying circuits, etc. Hence, it was considered feasible to have one unit which would supply all power and contain all controls.

CONTROL UNIT The complete unit is built on one chassis which is

placed on the operating desk alongside the receiver. On the front panel are mounted the control switches, gain controls, tone oscillator, pitch control, microphone and key sockets and the modulation indicator.

At the rear of the chassis are six octal sockets, wired in parallel, which act as outlets to the various transmitters.

Each transmitter has its own filament transformer and aerial change-over relay. In each transmitter is incorporated a switch in the 240-volt AC supply to the filament transformer and a 5-pole

fraternity. They are cheap, readily available, neat and conservatively rated at 240-volts, 5-amps. in either SPST or SPDT. They come in several brands, both brown and white and the escutcheons are easily engraved.

The following circuits are controlled by these switches: Filament supply, exciter HT, final HT, modulator, phone send-recv, oscillator on for VFO setting. The first four switches are wired as shown in Fig. 1. The function of the other two will be described later.

POWER SUPPLIES

There are three power supplies, identical except for the type of rectifier transformers are 385-volt broadcast type. The filter is the usual 8 uF-choke-8 uF. ordinary 8 uF. 525-volt electrolytic supply has a 200 Ma. fused in the centre-tap lead to prevent accidental shorts.

By using three different types of rectifiers, different voltages are obtained from each supply. With a 5Y3 the exciter pack delivers 320 volts. The PA supply, with a 5R4GY, gives 400 volts, and by using a 5V4 in the modulator supply 450 volts is obtained.

The complete diagram of the exciter power supply and the control circuits is given in Fig. 2. T1, V1, L1, C1 and C2 are the power supply delivering, under load, approximately 350 volts across the points A and D. R1, R2 and R3 form a voltage divider with the point B at 150 volts and the point C at 10 volts positive to the point D. Terminal 1 is connected to the exciter HT terminal in the transmitter, terminal 2 to the screens of the key stages, 3 is the oscillator HT, 4 is the common earth, and termi-

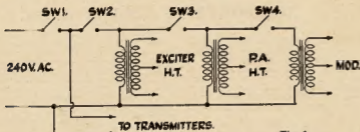


Fig. 1.

This, of course, would impose limits on the design of the various transmitters. After some thought it was decided that this was not as great an obstacle as it first appeared, so it was decided to go ahead and work out a design for such a unit.

The first step in designing was to draw up a set of specifications. Consideration of the contents of the junk-box, some counting of the available bawbees and past operating experience dictated that the design should conform to the following—

REQUIREMENTS

- A maximum power of 50 watts under modulated conditions.
- A HT supply of 400 volts for the final, 300 volts for the exciter, stabilised 150 volts for the oscillator, and screen keying at 150 volts.
- A minimum of operating controls, i.e. as near automatic operation as possible.
- Simple and quick change from one transmitter to another.
- Provision for A2 operation.
- Standardisation of components.
- A constant check on percentage of modulation independent of which transmitter is in use.

A preliminary design was worked out and a unit built up which, after some experimenting, finally worked satisfactorily. As several novel features have been included, it is thought that a brief description of the complete unit plus a detailed description of several of the circuits would be of interest.

switch to break the HT circuits. This latter switch takes various forms in the different transmitters. For instance, in the 40-metre transmitter it is a straight 5-pole on-off switch, but in the 2-metre transmitter it is combined with the crystal switch. In all cases ordinary wafer switches have proved adequate for the power involved.

The control switches on the front panel are ordinary domestic miniature architrave switches. These switches are worthy of attention by the Amateur

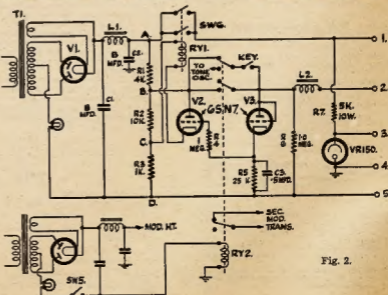


Fig. 2.

inal 5 goes to the coil of the aerial change-over relay, the other side of which is connected to earth.

C.W. Now consider what happens with the key up. The grid of V2 is connected to the negative side of the supply via R4 and R5. The cathode connects to point C which is 10 volts positive. This is sufficient to cut-off V2, consequently the filament draws no plate current and Ry1 remains open. When the key is closed the 150 volts from point B is applied to the anode of the diode-connected V3 which becomes conductive and charges C3 to nearly 150 volts.

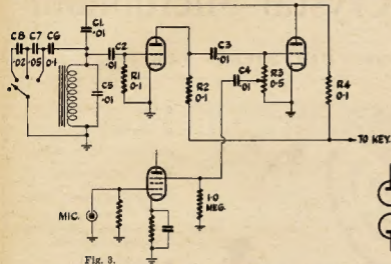


Fig. 3.

Since the grid of V2 is connected to the cathode of V3, it will also go to 150 volts positive—or at least it would if R4 were not in circuit. As soon as the grid of V2 has gone positive with respect to its own cathode, it commences to draw current. R4 keeps this grid current within reasonable limits, but allows the grid to remain at a slight positive potential. V2 now conducts and the resultant plate current causes Ry1 to close, supplying HT to the exciter and via R7 and the VR150 to the oscillator. 150 volts is also supplied from the key to the screens of the keyed stages.

The total HT current of the exciter and the VR150 is flowing through the coil of the aerial change-over relay so it too operates and the transmitter emits a signal.

When the key is lifted, the 150 volts is removed so the transmitter stops transmitting and V3 stops conducting. However, C3 does not instantly discharge due to the high value of R5. This means that the voltage across C3 falls at a comparatively slow rate. When it has reached a low enough point, V2 stops conducting and Ry1 opens, thus removing voltage from the oscillator and allowing the aerial change-over relay to re-connect the aerial to the receiver. If, however, the key is closed again before the discharge of C3 has reached this point, C3 recharges to the full voltage and the delay commences all over again.

Thus it can be seen that Ry1 closes instantly with the first closing of the key, but opens only if the key is left open for a definite time, this time depending on the values of C3 and R5. With the values given, Ry1 just opens between words at normal keying speeds.

Ry1 needs to be a fast closing relay with a bobbin that will operate on a couple of milliamps. If extra contacts are available, these may be used to silence the receiver. Sw6 is a switch mounted on the front panel of the unit and is used to set the VFO.

Let us have another look at the keying circuit. Very few tubes will key

it to close. The three contacts on Ry2 then perform the following functions: Closes the keying circuit, changes over the key circuit so that it now supplies HT to the tone oscillator, and removes the short across the secondary of the modulation transformer.

SWITCHING The full switching procedure is: Make Sw1 and Sw2, close the filament switches on the transmitters which it is anticipated will be used, close the HT switch on the transmitter required. When the filaments have warmed up, close Sw3. The transmitter is now ready for c.w. operation and merely requires manipulation of the key. For phone operation Sw4 is made at the same time as Sw3. Sw5 is then the send-receive switch.

Note.—When Sw5 is made, the key is automatically connected to the tone oscillator, so keep clear of it when operating on frequencies below 30 Mc. To prevent accidental transmission of the wrong type of emission on these bands, the author turns the tone oscillator gain to zero.

With Sw1-4 made, either c.w. or phone transmissions can be made without any further changing over. Hitting the key gives c.w., making Sw5 and speaking gives phone, and making Sw5 and hitting the key gives m.c.w.

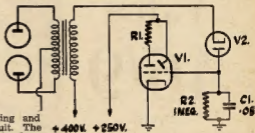


Fig. 4.

TOE The tone oscillator circuit is shown in Fig. 3. A 6SN7 is used as a Franklin oscillator and the output is taken from the grid-leak of the second half and fed to the suppressor of the 6SJ7 which is the first stage of the modulator. (The remainder of the modulator is a 6N7 phase inverter driving a pair of 6L6s in Class AB1.) The coil for the tone oscillator is the primary of an ordinary speaker transformer.

MODULATION CHECKER

Fig. 4 is the circuit of the modulation checker. V2 may be any type of tube which will stand the HT voltage. The author uses a 6V6 with the plate, screen and grid tied together. A separate filament winding, which is not earthed, must be used to avoid exceeding the rated heater-cathode voltage of the valve. V1 is an ordinary "magic eye."

The circuit operates in the following manner. With no modulation, the cathode of V2 is 400 volts positive with respect to earth. With modulation, this voltage swings up and down about the mean voltage of 400. 100% modulation will cause it to swing up to 800 volts and down to zero. However, with any percentage of modulation below 100, the cathode is always positive with respect

(Continued on Page 7)

satisfactorily merely by opening and closing the screen supply circuit. The keying will have a poor break characteristic and considerable backwave. The cure is to apply a small negative bias to the screen when the key is open. This makes the keying clean and positive. R6 supplies this negative bias. With Ry1 closed and the key open, the power supply is feeding the oscillator and the VR150. This current is flowing through the bobbin of the aerial relay, i.e. from terminal 5 to terminal 4, and causes terminal 5 to assume a negative potential with respect to earth. This is fed to the screens via R6 and provides the negative cut-off bias.

L2 is a keying filter to get rid of the clicks. A point to watch here is that L2 works on both the make and break. As the screen circuit is still closed with the key open so that if a large screen bypass condenser is used, the keying will have unduly long tails. Another point is that L2 is working into a higher impedance circuit than would be encountered with cathode keying and needs to be of a higher inductance value. A small filter choke does a good job in the author's transmitter.

PHONE For phone operation, Ry2 does all the switching. Ry2 is a disposals relay with a 28-volt bobbin of approximately 250 ohms resistance. Sw5 is the send-receive switch on the front panel. When Sw5 is closed the full HT current of the modulator flows through the bobbin of Ry2 and causes

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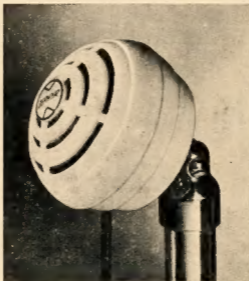
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PART TWO

BY TOM ATHEY,* A.I.R.E. (Aust.)

SECTION ONE (Continued)

I.F. Channel

The channelist, as I term the i.f. channel, is a normal conventional double converted job, using 1600 Kc. and 100 Kc. Looking at the schematic, you see that the input from the converter is fed to the standard set-up of short wave aerial and oscillator coils, tuned with a two-gang condenser. This two gang condenser is one of the midget b.c. type of approximately 450 pF. No dial is needed as the gang is set to the acceptance frequency from the converter, then screw-driver locked. This way the input frequency is fixed to the output frequency of the converter, and should require no further adjustment, once set.

The use of ordinary s.w. coils will present no difficulty in obtaining parts, hence their use.

Tune the converted frequency to the i.f. frequency of 1600 Kc. and feed it through the first i.f. amplifier valve in the normal way. The plate output from the i.f. amplifier is then fed to a second converter having a frequency difference of 100 Kc.

Again, as crystals of either 1500 or 1700 Kc. may be hard to obtain, an ordinary b.c. oscillator coil can be used in the oscillator portion. Use a slugged coil and with a fixed padder across the coil, it is possible to slug the coil to the required frequency difference of 100 Kc. As is well known, the b.c. coils

hold their frequency without drifting to a remarkable degree of accuracy.

The new i.f. frequency of 100 Kc. is again fed to a second i.f. amplifier, only this time use a valve having diodes in its make-up, such as an 6N8, or 6G8G. These diodes are used for the pick-up of the voltage for the a.v.c., more of which will be spoken about later. The new 100 Kc. i.f. frequency is now fed to the twin diode valve (either a 6AL5 or a 6H6).

The first diode acts as a demodulator for feeding audio to the driver stage. The second diode acts as a series noise limiter, controlled by an on-off switch. In either case, the audio output is fed to a voltage amplifier. This valve can be either a triode or a pentode, but I have always found that a triode will give you plenty of gain if it is wired in as shown in the schematic.

For the sake of economy use a 6SH7 here. There are plenty of these tubes around (usually for about 5/- each). Wire it as a triode. The only difference to the standard circuit is that the cathode is earthed instead of having cathode bias. Examination of the driver portion of the circuit shows how the valve is connected. I use this system always and find it very satisfactory.

The driver stage is then fed to the output valve. It is not necessary to use a large output here because it is unnecessary. So long as the volume is sufficient to give reasonable output to the speaker system, there is no need to worry the neighbours with the results of your prowess in hearing a VK1 or

the other side of the world. A 6K6 valve is all you need (or a 6M5). If you are content with low output, use a 6AMS. This valve will deliver about $\frac{1}{2}$ of a watt of audio and at the same time keep your final power valve drain down to 19 Ma. (instead of the normal 50 Ma.)

Regarding the speaker system, I have shown two. These are of the three inch type. This is just a bit of flashness to balance the panel and need not be followed. One 5" speaker will do quite as well.

The b.f.o. valve is half of a 6SN7 or a similar type (12AU7) and beats against the 1600 Kc. i.f. input to the second converter. A small condenser is used to vary the note and to allow you to zero-beat the b.f.o.

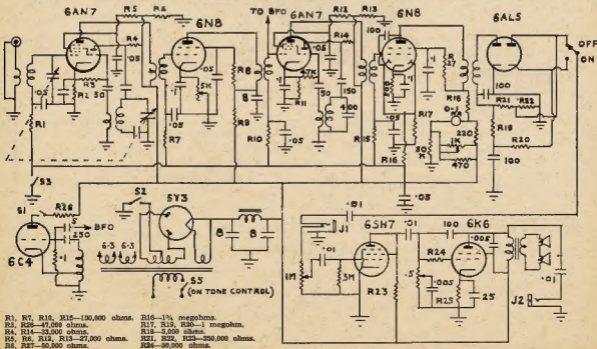
The other half is used for the "Guess Meter"—I term it this way as in most cases it is only guess work. The calibration of such a meter is left to your own individual requirements.

A FEW POINTS ON CONSTRUCTION

From the drawings of the chassis (see August issue) you will see how the recess for the plug-in converters is made. Cut out the recess from your chassis, making it neat and square. Make the opening a free fit, but do not allow it to become too free.

Align the pins accurately so that when the converter is slid in, the pins engage the sockets easily and tightly. Care must be exercised that you allow for the pins in the depth of the opening front to rear. A panel that does not fit snug

* Ex-Instructor Q'land Division W.I.A. Classes; 41 Mountford St., New Farm, Brisbane.



R1, R7, R10, R15—100,000 ohms. R16—1½ megohms.
R2, R26—47,000 ohms. R17, R19, R30—1 megohm.
R4, R14—33,000 ohms. R18—5,000 ohms.
R5, R6, R12, R13—27,000 ohms. R21, R22, R23—330,000 ohms.
R8, R27—50,000 ohms. R24—30,000 ohms.

SEEN but not HEARD

VOLTAGE AMPLIFYING PENTODE EF86

Low-noise pentode primarily intended for use in high-gain R.C. coupled A.F. voltage amplifier stages.

CHARACTERISTICS

V_a	6.3	V
I_b	0.2	A
G_{mct}	5.5	$\mu A/F$
C_{in}	4.0	$\mu A/F$
C_{out}	0.025	$\mu A/F$
V_a	250	V
V_{g1}	140	V
I_a	3	mA
I_{g1}	0.55	mA
V_{g1}	-2	V
V_{g2}	0	V
g_m	1.85	mA/V
r_p	2.5	MΩ
μ_{g1-g2}	38	

OPERATING CONDITIONS

AS R.C. COUPLED PENTODE A.F. AMPLIFIER

V_a	250	250	V
R_a	10.1	10.22	MΩ
R_{g1}	10.59	11.0	MΩ
R_{g2}	11.0	12.2	kΩ
R_{g3}	330	680	kΩ
I_b	2.05	0.95	mA
V_{out}/V_{in}	112	180	

* Grid resistor of following valve.

† Values $\pm 10\%$.

The Mullard EF86 is an all-glass, low noise valve, with the universally accepted single-ended 9-pin technique. The total generated noise expressed in terms of an input to the grid is less than 5 micro volts.

Incorporating the best features of the earlier low noise, low hum, low microphony types, the Mullard EF86, like the picture tube, is truly a valve that is seen but not heard.



The inspection of Mullard picture tube gun assemblies.



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COLD CATHODE TUBES — MEASURING INSTRUMENTS — SCIENTIFIC APPARATUS — RADIO RECEIVERS — COMMUNICATIONS EQUIPMENT
ULTRASONIC GENERATORS — PERMANENT MAGNETS — MAGNETIC MATERIALS AND COMPONENTS, ETC.

MR3-59

and close to the main panel spoils the whole appearance of the job.

The positioning of the controls, shown on the channel panel is self-explanatory, and should not need any comment. The speaker panels are again just a bit of skirting, but if done in chrome would look "super".

When building the power pack, work out the number of milliamperes you want to handle the valve line-up, not forgetting the converters. Under normal requirements a transformer of about 100 Ma. of h.t. is ample, but again this depends on your own requirements. The filaments need about 4 amps. of current to be on the safe side, so I would suggest that your transformer be as follows:

One transformer: 100 to 120 Ma. h.t. 280-0-280 volts, two filament windings of 6.3v. at 3 amps. each, one filament winding of 5v. at 2 amps. One of this type would allow a safety margin and avoid a risk of burn-outs.

A.V.C.

A.V.C. is picked up from the diodes of the second i.f. amplifier and fed to all stages on the channelist. Provision is made by means of a switch to cut off the a.v.c. at will and allow you to run the set at maximum gain, when chasing those weak signals.

The size of the 5 meter is an optional matter. There is on the market a meter already calibrated for signal strengths. I'm not sure but I think it is supplied by The Master Meter Co. Enquiries from the trade houses in your town would clear up this point.

That's all chaps on the receiver. The rest is up to you. One thing, if you decide to build it up, I feel sure that the effort you put into it will be well worth while. It virtually is a 10 valve triple conversion super having high gain, good selectivity, and low noise ratio to signals.

BOOK REVIEW

Low Frequency Amplification

Low Frequency Amplification by Dr. N. A. J. Voorhoeve, pp.495. Published in the Philips' Technical Library series. Our copy by courtesy of Philips, of Holland.

This book contains a lot of interest to Amateurs, excepting, of course, the dyed-in-the-wool c.w. only types. It covers almost the whole of the audio field, not only amplification as the title would suggest, but all the auxiliaries like microphones, recordings, pick-ups, loud speakers, power supplies, components and measurements.

Now this is quite a lot to pack into one book. The author has done a good job in selecting what to put in and the result is about the right standard for the Amateur. It is not a designer's manual with page after page of mathematics nor is it a collection of circuit diagrams, but it steers a middle course in a very readable manner.

Like most European books, a number of unknown valve types are mentioned, but the characteristics of the more important ones are given. All the examples are taken from Philips products but the book is in no sense a trade catalogue or a sales pamphlet, but one which can be recommended.

-A.K.B.

Screen Modulation

Mr. J. A. Gazard, B.E., of 39 Glenhuntingly Street, Woodville, S.A., has raised a point regarding the article "A New Modulator for the Type 3," in August issue of "A.R." which was not mentioned in the original description. We print, therefore, his remarks on the subject, which applies to all systems of Screen Modulation.

With the arrangement shown, the screen of the 6L6 is at 250 volts without modulation, but under full modulation it will vary from 0 to +500v. The rise from 250 to 500 volts will not give a corresponding increase in r.f. amplitude and consequently the envelope of the output wave will be very distorted, having small positive and large negative peaks.

Goodman, in June, 1954, "QST," page 15, says re screen modulation—

"If we make it (the operating voltage of the screen) the normal screen voltage for the tube used as an r.f. amplifier, we are going to swing it up to twice this voltage on peaks. Two things can happen. The tube can burn up because it is being overloaded, or the output can increase without hurting the tube, showing that we were not getting as much out in the first place as we could have got. The only way is to first find out what the tube can do as a straight r.f. amplifier and then cut the screen voltage back to about one half."

In the case of the Type 3, we are getting all we can out of the 6L6 and therefore it is just as necessary to drop the screen voltage back to about half using either the choke or the transformer for modulation.

— — — — —

Transmitter Control

(Continued from Page 5)

to the anode (earth) and no current flows through V2. If the modulation exceeds 100% the cathode swings through a voltage range greater than 400 in each direction.

In the upward direction, this will be greater than 800 volts, but in the downward direction, the cathode will assume a negative potential with respect to the anode as soon as the modulation exceeds 100%. It will then conduct and charge up C1, thus making the grid of V1 negative and causing the "eye" to close. By omitting C1 and using R2 only, the "eye" would close on over-modulation peaks, but the time of closure would be the same as the duration of the peak.

With the transients encountered in speech the flicking of the "eye" would be so fast as to be hard to see, but by using the C1-R2 combination the peaks are lengthened and are plainly visible even with the "eye" not in direct view.

A word of warning must be sounded about this system however. Its purpose is merely to indicate when the modulation exceeds 100% on the negative peaks. An oscilloscope should be used to adjust the transmitter so that the modulation is symmetrical and linear. After that the gain control should be set so that the "eye" closes on heavy words. This means that the modulation is exceeding 100% on peaks, but also ensures that the modulation is sufficient at all times.

AMATEUR CALL SIGNS

FOR MONTH OF JULY, 1954

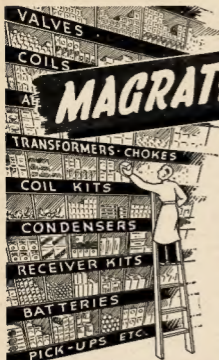
ADDITIONS

- VK— New South Wales
12W—E. R. Woodman, 22 Victoria Ave., Murrumbidgee.
22S—W. J. Smith, 33a Sandringham St., Sans Souci.
2AEO—D. Pronger, 3 Richmond St., Croydon.
2AEP—C. Bennett, 19 Helen St., Westmead.
2AEP—R. R. McKew, Flat No. 1, 19 McKew Murrumbidgee.
2AOW—C. F. N. Wade (Lt.-Col.), 4 Hope Ave., North Manly.
2AYB—S. C. Burton, 22 Arcadia St., Penrith.
2EAD—A. A. Davis, 43 Cam St., Griffith.
2EAP—E. Pearce, 18 Meacham Gardens, Narrabundah, Canberra, A.C.T.
Victoria
3BY—O. Holst, 27 Bamber Rd., Caulfield, S.E.T.
3VS—L. I. Griffin (Rev.), 25 Clifton Gr., Coburg, N.11.
3AAC—W. R. Clifton, 9 Clarence St., Eatenwick.
3ACD—R. A. Hipwell, Pier Street, Dromana.
3AE—M. Hay, 34 Newton St., Shepparton.
3AXA—R. A. Watson, Back Beach Rd., Portsea.
3AYB—R. L. Brownbill, 7 Henry St., East Geelong.
3ZAH—L. H. Haynes, 87 Holmes Rd., Moonee Ponds.
Queensland
4XB—G. J. Bean, 69 Beryl Cres., Holland Park, B.R.B.
Western Australia
5KO—R. K. Westbrook, 25 French Ave., Merredith.
5QO—F. R. Gray, 107 Kensington St., East Perth.
6ZL—B. D. Woods, C/o O.T.C. Wireless Station, Applescross.
Tasmania
7MA—M. G. Buriagh, 53 Pitt Ave., Marawake, Launceston.
Territories
5JH—J. F. Hargrave, C/o Dept. of Civil Aviation, Port Moresby.
9FF—F. T. Filmer, Kevling, New Ireland, T.N.G.

ALTERATIONS

- VK— New South Wales
2FV—26 Jamieson Street, Broken Hill South.
2FY—25 George St., Greenwich Point, Sydney.
2KP—3 Carrington Avenue, Caringbah.
2ML—23 Kurrungals Street, Sutherland.
2QZ—3 Ventnor Ave., Sydney.
2TV—Flat No. 4, 5 William Street, Randwick.
2VH—Gipps Road, Ketraville.
2VJ—48 Denison Street, Concord.
2AFO—45 Bridge Road, Hornby.
2ARD—C/o "East Camp," Snowy Mountain Authority, Combs.
2AYB—13 Kelvin Avenue, Picnic Point, Fanania.
2AUV—Federal, via Lismore.
Victoria
3KY—20 Elizabeth Street, East Brighton, S.E.
3OA—Station, 69 Flinders Street, Kerang; Postal: P.O. Box 61, Kerang.
3AAP—28 Mitchell Street, Mildstone.
3AJT—75 Berry Avenue, Chelsea.
3AJH—123 Liberty Parade, West Heidelberg.
3ACJ—Main South Road, Drouin.
3AMV—106 Victoria Street, Warragul.
3ATL—Station, Congaham Church Hall, Gheringham St., Geelong; Postal: 158 Kilgour St., Geelong.
3AUB—Elmo Road, Murrumbidgee.
Queensland
4CJ—Cr. Jone and Naughton Streets, Wandral, Rockhampton.
4ES—Ford Street, Upper Mt. Gravatt, Brisbane.
4IM—No. 27 Thorne Street, Kararo Point.
4LT—Drayton Street, Nanango.
4NG—Station, Millers St., West Rockhampton; Postal: P.O. Box 99, Rockhampton.
South Australia
5MY—15 Mackay Avenue, Plympton.
5XP—1 Glenloch Avenue, Westbourne Park.
Western Australia
6BY—Cr. Glenloch and Lombard Sts., Applescross.
6FC—16 Brook Street, Kalamunda.
Tasmania
7BK—22 Downing Ave., Dowling Point, Hobart.
7WN—House No. 226, No. 2 Camp, Terrestrial.
Territories
9GV—C/o D.C.A. Meas. Lab.
DELETIONS

New South Wales: VKs 2DR, 35Z (now operating under 9FF), 5VV, 2AIZ, 2AKH, 2AIB, 2AMA (now operating under 7MA1), 3AVM.
Victoria: VKs 2VJ, 3OP, 3WV, 3APR, 3AHP (now operating under 2AEO).
Queensland: VKs 4JH (now operating under 8ZL), 4ZL (now operating under 3AUB).
South Australia: VK5CW (now operating under 2AAC).
Territories: VK8RO.



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Carlisle Pty. Ltd.

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VK-ZL DX CONTEST, 1954

N.Z.A.R.T. and W.I.A., the National Amateur organisations in New Zealand and Australia, invite world-wide participation in this year's VK-ZL DX Contest. The object is for the world to contact VK and ZL stations, and vice versa.

When. PHONE—24 hours from 1000 hours G.M.T. Saturday, 2nd October, to 1000 hours G.M.T. Sunday, 3rd October C.W.—24 hours from 1000 hours G.M.T. Saturday, 9th October, to 1000 hours G.M.T. Sunday, 10th October.

RULES

1. There shall be three main sections to the Contest—(a) Transmitting C.w., (b) Transmitting Phone; (c) Receiving, Phone and C.w.

2. The Contest is open to all licensed Amateur transmitting stations in any part of the world. No prior entry need be made. Mobile Marine or other non-land-based stations are not permitted to enter the Contest.

3. All Amateur frequency bands may be used, but no cross-band operation is permitted.

4. Phone will be used for the first week-end and c.w. for the second week-end. Stations entering for both phone and c.w. sections must submit entirely separate logs for each.

5. Only one contact per band is permitted with any one station for contest purposes.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operators operate any particular station, each will be considered a competitor and must submit a separate log under his own call sign.

7. **Cyphers:** Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 1 or 8 figures will be made up of the RS (telemetry) or RST (c.w.) reports plus three figures which may begin with any number between 001 and 100 for the first contact and which will increase in value by one for each successive contact, e.g., if the number chosen for the first contact is 053, then for the second contact the number must be 054, for the third 055 and so on. If any contestant reaches 999, he will start again with 001.

8. **Scoring:** For VK and ZL stations **ONLY**—Fifteen points will be scored for the first contact on a specific band with any overseas country; fourteen points will be scored for the second contact on the same band with the same country; thirteen points for the third and so on to the fifteenth contact which will score one point. All contacts with that particular country on that band will thereafter count one point each. This scoring procedure will be repeated on each band to encourage multiband operation. There will be no VK-ZL contacts between each other. Official A.R.R.L. countries list will be used. **Note:** Points will not be entered in the log for each contact—totals for each country will be shown in the summary. **Each CALL AREA in the U.S.A. will be a "country" for scoring purposes.**

Overseas Scoring: One point will be scored for each contact on a specific band with any VK-ZL district. The final score will be derived by multiplying the total contacts on all bands by

the total number of VK-ZL districts worked on all bands. VK-ZL districts are: ZL—1, 2, 3, 4; VK—1, 2, 3, 4, 5, 6, 7, 8.

9. **Logs:** (a) Logs must show in this order: Date, time in G.M.T., band of operation, call of station worked, serial number sent, serial number received.

(b) A separate log must be submitted for each band. For each band an analysis sheet must be given showing: List of countries worked with numbers of contacts for each country and points claimed for each country worked, and total points for that band.

(c) A summary sheet to show: 1, station call sign; 2, name and address of the operator; 3, phone or c.w.; 4, list of points claimed for each band; 5, grand total of points; 6, brief description of equipment used during the Contest—transmitter, power, antennae, etc.

(d) A declaration that all Contest rules and regulations for Amateur Radio in your country have been observed and that the log is correct and true to the best of your belief.

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed regulations or who has consistently departed from the accepted code of operating ethics.

11. The ruling of the Executive Council of N.Z.A.R.T. will be final in the event of any dispute.

12. **Awards:** N.Z.A.R.T. will award attractive certificates to the top scorer on each band and the top scorer in each VK and ZL district. Awards will be announced by N.Z.A.R.T. and W.I.A. Additional certificates will be awarded, depending upon the number of logs received.

13. Entries from VK and ZL stations should be posted to N.Z.A.R.T. Contest Manager, Box 469, Wellington, New Zealand, to arrive no later than 21st January, 1955.

Receiving Section

1. The rules for the receiving section are the same as for the transmitting section, but it is open to all members of any shortwave listeners' society in the world. No transmitting station is permitted to enter for the receiving section.

2. The Contest times and logging of stations once on each band per week-end are as for the transmitting section. Logs will take the same form as the transmitting section.

3. To count for points, the call sign of the station being called; the call sign, strength and tone of the calling station, together with the serial numbers sent by the calling station must be entered in the log. Scoring will be on the same basis as for transmitting stations.

4. It is not sufficient to log a station calling CQ.

5. VK receiving stations may log overseas stations and ZL stations, while ZL receiving stations may log overseas stations and VK stations.

6. Certificates will be awarded to the highest scorers in each country. Extra certificates may be issued depending upon the number of entries received.

AN AID FOR COMPUTING SCORE

No. of Contacts	Pts.	No. of Contacts	Pts.
1	15	11	110
2	29	12	114
3	42	13	117
4	54	14	119
5	65	15	120
6	75	16	121
7	84	17	122
8	92	18	123
9	99	19	124
10	105	20	125

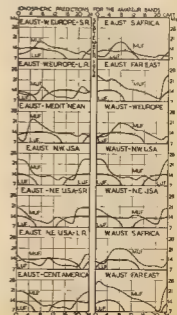
Wireless Operator Required for Flying Doctor Service

The Victorian Section of the Flying Doctor Service of Australia, which established and maintains the Flying Doctor Base at Wyndham, North-West Australia, is establishing an additional base at Derby, W.A.

Tenders have been accepted and it is expected that the building for the Wireless Control Station, and the Operator's Residence, will be completed early in the new year.

A Wireless Operator for the Base is required, and any member of the Institute interested is invited to communicate with the Secretary of the Section, Mr. J. W. Collings, 434 Collins Street, Melbourne. An up to date residence, providing for the operator and his family is being erected. This appointment offers a good opportunity for a young man possessing the necessary qualifications.

PREDICTION CHART FOR SEPT., 1954



FIFTY MEGACYCLES AND ABOVE

NEW SOUTH WALES

The July meeting of the V.H.F. Group took place at the home of Marion, Science House, in Gloucester Street. The evening was firstly devoted to clearing a number of agenda items dealing with future activities of the Group. Then Adrian BAKER explained the results obtained in the 1250 Mc. final of his new 144 Mc. tx demonstrating the result on a nicely constructed rig. Finally, a presentation was made by John 2JW, who presented joined in discussing unusual questions dealing with various aspects of radio theory, much to the amusement and enjoyment of all. The Fox Hunt was on 4th, and was marked by incidentally. The fox, Horrie 2JLH, was run to ground by John 2ANP. The final report for lunch was John 2JW's QTH at Bringley. After lunch, details of the 144 Mc. gear for the SWL link were discussed and a complete parts list made out. Those present were 2JW, 2JH, 2ANP, 2JLH, 2APQ, 2AJZ, 2AJA, Ess Griffiths and Colin. This has enabled further work to be done in layout and determining overall size of the link.

The 144 Mc. Mid-Winter Contest took place on the evenings of the 17th and 18th when a total of 25 stations took part—not as many as last year, but an enjoyable contest. The aim was to work as many stations as possible each night between 7 and 11 p.m., only one contact with any station each night, to come in as follows: 2ANP 30, 2JLH 37, 2JH 38, 2JW 39, 2AJZ 40, 2JLH 41, 2JH 42, 2AJZ 43, 2JLH 44, 2JH 45, 2AJZ 46, 2JLH 47, 2JH 48, 2AJZ 49, 2JLH 50, 2JH 51, 2AJZ 52, 2JLH 53, 2JH 54, 2AJZ 55, 2JLH 56, 2JH 57, 2AJZ 58, 2JLH 59, 2JH 60, 2AJZ 61, 2JLH 62, 2JH 63, 2AJZ 64, 2JLH 65, 2JH 66, 2AJZ 67, 2JLH 68, 2JH 69, 2AJZ 70, 2JLH 71, 2JH 72, 2AJZ 73, 2JLH 74, 2JH 75, 2AJZ 76, 2JLH 77, 2JH 78, 2AJZ 79, 2JLH 80, 2JH 81, 2AJZ 82, 2JLH 83, 2JH 84, 2AJZ 85, 2JLH 86, 2JH 87, 2AJZ 88, 2JLH 89, 2JH 90, 2AJZ 91, 2JLH 92, 2JH 93, 2AJZ 94, 2JLH 95, 2JH 96, 2AJZ 97, 2JLH 98, 2JH 99, 2AJZ 100.

Now that the Mid-Winter Contest has passed, the next annual fixture of the Group is the Spring Field Day to be held on Six-Hour Day, Week-end, 28th October. The object of this fixture is that Sydney stations go further afield than in previous years, and make more contacts with stations to contact them. This year the aim is to form a chain of 2 mHz stations from Sydney north to the Hunter District, over the Blue Mountains, to the Western District, to the South Western, Canberra and back to Sydney, covering as great an area as possible. Then after the Spring Field Day, a message will be sent to the Western, Canberra and back to Sydney, covering as great an area as possible. Then after the Spring Field Day, a message will be sent to the Western, Canberra and back to Sydney, covering as great an area as possible. Then after the Spring Field Day, a message will be sent to the Western, Canberra and back to Sydney, covering as great an area as possible.

Several country stations have signified their intention to take part and John 2ANP, the Secretary of the Group, would like to hear from any station who wishes to take part so that arrangements can be made to perhaps place a portable battery in a location to ensure continuity in the circuit.

We hear that John 2AJZ at Coolman had a 1b. contact with 2ATN at Birchip, a distance of 270 miles, and a very good signal. This makes the link through to VK3 possible for the Spring Field Day.

Lessons for the September and October meetings have been arranged and will be "Maps and Mapmaking" and "Points on the manufacture of Condensers" and "Points on the manufacture of Condensers". This is to keep the mind in the month in mind and come to the V.H.F. Group's meeting.

John 2ANP continues to work. Hugo 2JW is busy on the drawing board planning the layout of the SWL 144 Mc. equipment. Ted 2ABO is working down the South Coast to Mount Kerin with a very nice signal. Fred 2JX's tower is fast taking shape. New stations are being added to the band. Welcome to the band chaps.

A note on grounded grid amplifiers from John 2ANP, which would interest those who are experimenting with v.h.f. rx's. The layout of grounded grid amplifiers in v.h.f. rx's is a fairly obvious one, but many Amateurs still seem to take the wrong path.

The idea is to isolate input and output circuits to prevent regeneration. As the grid is grounded, the input and output circuits must be connected to one side of the shield and the cathode circuit to the other. The shield should run across the centre of the socket and the input and output circuits and heater circuit kept to one side of the shield. The most common error made is with the grid. Here it is most convenient to run the heater chokes (which are essential) on the plate side of the shield. This should be avoided.

Even if it means some tricky bending, arrange the shield so that heater pins are on the cathode side of the shield. It is most easily achieved by making pin 1 the active plate and grounding pin 2. The shield may then run between pins 3 and the space between pins 4 and 7. Now there is a suggestion that may make all the difference in that rx you intend to use the shield.

A few more frequencies to note: 2ALJ 144.2 Mc. 2ABR 144.8, 2JH 144.8, 2QZ 144.8, 2AQB 145.2, 2JW 145.2, 2APQ 145.2.

VICTORIA

The main activity in VK3 continues to rest with the Western District gang 2AGD at Coleraine has now a 3 over 2 up to 40 ft. Bircip has a 30 element also at 30 ft. 2ABR at Westmore has a 4 over 4 over 4 up to 40 ft. 2JLH at Westmore has a 20 element, 2APQ also has a 32 element. 2JLH has a 20 element and new stacked beams are in the course of construction at 3BW at Portarlington and 2BQ. This great enthusiasm for stacked arrays has resulted in many excellent contacts and really good and consistent signals are regularly heard from all of the above stations.

2ZAA has made a very excellent initiation to the band and is on every night with an 829 final feeding a 5 over 5 beam. Very little activity has been heard from any of the better Z calls with the exception of 2ZAC and 2ZAR. The C.D.E.N. Fox Hunt last month resulted in the best turn up so far and at the conclusion of the Hunt, 23 of the gang enjoyed the hospitality of 2OJ and his wife Dorrie. On this occasion a mass start was tried with the fox cop. 2JLH, receiving only a ten minute start. On the first run, the fox car was successful in evading the hounds, but on the second run he was caught by 2UJ, followed by 2Y3-2ABA combination, then 2ZAA and Norm Dench. On the final run 2OJ's location, 2Y3 and 2ADJ were the winners. These hunts will continue throughout the year on the second Wednesday of each month, so put a note on the calendar and if you are home get on the band to help the mobiles with the hunt.

The V.H.F. meeting this month took the form of a visit to the manufacturing plant of Australian Patent Mill and Paper Co. Ltd. in Norm Dench for the excellent arrangements. All who participated thoroughly enjoyed an interesting and unusual evening. The VK3 gang are looking forward with anticipation to the proposed Australia-wide field day to be arranged by the VK3 boys in October—2JLH.

SOUTH AUSTRALIA

During this month of writing some activity on 978 Mc. should come forth from its chassis and should repay the efforts of Bob 2PU who succeeded in obtaining some 200 Mc. neon line oscillators for the VK3 boys at a price within their pockets. Brian 2CA has succeeded in using one as a mod. osc. and a second as a super-regen. to work John 6WV in the next room—some DX what! And as Brian says, "If I can, who can't?" It has a diode-tube tube with a grounded grid, tuned cathode, tuned anode circuit and takes a couple of hundred volts comfortably. Should provide good training for the young and old. Graham 2JH has been rapidly catching up on his younger years. Thanks Bob from the v.h.f. experimenters. I guess that this year Col. Keith 2JH and others will be having a thoroughly happy and interesting time.

2B1 Mc. also seems to be reviving from its rabbit-killer of last year and Tom 2TD reports that he is on the band every Sunday 1030 hours or immediately following the SWI session; with Bob 2FR also on the lookout for contacts. Tom has made a regular schedule of this for over 18 months and hopes to continue indefinitely. So turn your eyes and beams to the East chaps and line Tom up.

Close at hand, as the crow flies, is Ian 2ZAA who wanted to time as you can see by the call sign and the spile of the antenna. Ian now becomes an active Amateur; whilst rack further shield literally, is Don 2ZAM at Radford Hill with ambitions on 144 Mc. and a fervent desire to educate the local inhabitants in the art of radio propagation. Should be able to make some contact with Berri Don when you get going. Hughie 2BC has the 2B2 VFO is reaching out into the surrounding country; some sort of a network with STL, 2BC, 2JLH and 2ZAA should be the goal. I should like to see Hughie has contacted Bircip again, but has to date no success with 2JLH in spite of the fact that Tom at Renmark is faithful to Hughie and doesn't get much further away from the spaces. Wait till you get into them yourself Tom, perhaps the signals will be coming pigeons.

News from the South East, concerns mainly the opinions on the tape recording and the

Literature. By the time you read this chaps, the Institute will own a Wordograph and I will be able to forward copies of the script to each of you instead of one miserable copy! The months of July and August have been hectic ones for me and I haven't been able to edit the recording on "Crystals," but hope on my holidays are close at hand and it should appear at the end of August.

April issue of "Radio and Television News" contains an excellent article on a 144 Mc. tx-rx using three 6J5s in the r.f. section with the usual line output and a 6AK5, 6AQ5 modulator and rx audio compound-tuning section of the rx uses a 6AK5 r.f. amplifier, 12AT7 osc. with second half used as a mixer with output to 18 Mc. All stages are low impedance fully coupled (including the osc. injection on 125-129 Mc.). As this was built for C.D. operation, it should appear in the mobile-minded enthusiast. My copy from the Adelaide Lending Library via 2PB, so should be available to the city and country boys on the Library.

"QST" features two pages of data and photos of the "plumbers" working over a 41 mile course on 10,000 Mc.—repeat 10,000 Mc. Krypton feeding and being fed by parabolic reflectors make interesting reading.

Oh, well chaps, back to the pipe dreams—2ZU

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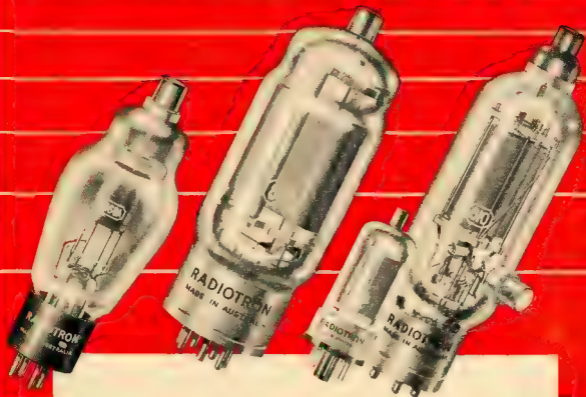
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100 Mc.	2.4 db	4.3 db	5.0 db	—	6.00 db	—
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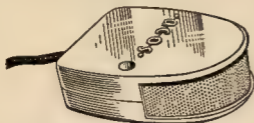
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FEDERAL, OSL, and DIVISIONAL NOTES

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Fed. President: W. R. Gronow, VK3JWG.
Fed. Secretary: G. M. Hull, VK3ZDS, Box 2611W, G.P.O., Melbourne.

QSL Bureau: R. E. Jones, VK3RJ, 33 Landale Street, Box Hill, Vic.
DX CC Manager: G. L. Morris, 59 Eighth Street, Parkdale, Vic.

NEW SOUTH WALES

President: Jim Corbin, VK3YC.
Secretary: Harry Hickin, VK3ACH, Box 1734 G.P.O., Sydney.

Meeting Night: Fourth Friday of each month at Science House, Gloucester Street, Sydney.
Divisional Sub-Editor: Ted Whiting, VK3ACD, 16 Loudon Street, Five Dock.

QSL Bureau: J. B. Corbin, VK3YC, 78 Maloney St., Eastlake, Sydney (Inwards and Outwards).
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK3AH, Ryan Ave., West Kempsey, Newellville; Ron McD. Stone, VK3ASJ, 85 Dunbar St., Stockton, Coffs Harbour and Lakes: Harry Hawkins, VK3YL, 27 Comfort Street, Coffs Harbour; Western: W. B. Ed. VK3WVH, Camblough, Forbes, North Coast and Southern: Eric Faber, VK3JY, 2 Oxley St., Warrumbungle; Central: J. B. Corbin, VK3YC, VK3AJA, Wallace St., Cootamundra; St. George: Chas. Coyle, VK3KX, 48 Carlton Cres., Kogarah; Western Sydney: Barry White, VK3AAJ, 33 Flavelle St., Concord.

VICTORIA

President: G. Donnan, VK3TF.
Secretary: C. Gibson, VK3FO.

Administrative Secretary: Mrs. G. Pickering, Law Court Chambers, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at Radio Society, Heathcote, Col. 100.
Divisional Sub-Editor: K. E. Pincott, VK3AFJ, 14 Duncombe Ave., Ashburton, S.E.11.

QSL Bureau: Inwards—Graham Roper, VK3ZS, 35 Lucas St., South Caulfield, Vic. Outwards—Frank O'Dwyer, VK3QF, 180 Thomas St., Hampton, S.V. Vic.
Zone Correspondents: Central Western: Merv. Collins, 18 Mount Road, Box 100, West. Western W. Wines, 11 Redford St., Warrnambool, and E. Giddings, VK3IANQ, 8 Nelson St., Warrnambool; North Eastern: A. D. Buchanan, VK3FO, "Broomfield", Wabriga, Far North Western: M. Folie, VK3GZ, 191 Lennox Ave., Mildura; Eastern: Leo Dwyer, VK3SSG, and John Bettrick, North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

QUEENSLAND

President: Harold Murphy, VK3HM.
Secretary: Ern Moore, Box 6387, G.P.O., Brisbane.

Meeting Night: First Friday in each month at the Royal Geographical Society Rooms, Ann Street, City.
Divisional Sub-Editor: J. T. Hope, VK3KL, Royal Parade, St. John's Wood, Ashgrove.
QSL Bureau: Inwards—J. Flies, VK3JY, Wenda St. Buranda; Outwards—Miss Clair O'Brien, 25 Jardine St., St. Albans.

FEDERAL

EMERGENCY OPERATION

Conditions and circumstances of National Emergency Operation are fully covered in the Handbook for Operators of Amateur Wireless Stations. Those relating to "Local" Emergency are less explicit.

In relation to this, Federal Executive sought clarification from the Amateur Administration. It is thought possible to lay down inflexible rules to be observed, the following points are published in order that Amateur Station Operators will have some knowledge of what can be expected of them.

In an emergency of a "Local" nature, the Amateur licensee should always place himself under the direct control of the local authority co-ordinating all activities relating to the emergency. This is usually the local Police, though in some cases other officials such as the local Firemaster, Mayor, or Regional Fire Officer may be the directing authority. However, it is suggested that as a general rule the Amateur licensee should first consult with the local Police.

As the licensee is responsible for the operation of his station he should see that only authorized traffic is passed and that his own call sign is used. All frequencies within the Amateur bands should be used. The co-ordinating authority will be responsible for the matter, and no person or firm will be licensed or accepted by the Amateur Station licensee.

Recalling the fine tradition shown in the past by Amateurs in Australia, it is assumed that this outline will be of value to those who will be able to give valuable service in situations requiring immediate action.

ANOTHER ONE TO GO FOR!

The Amateur Radio Association of Trieste (A.R.A.T.) has instituted an award, known as the F.T.T. Certificate, which will be issued to any licensed Amateur submitting confirmation of his radio service in connection with the Amateur Stations in the Free Territory of Trieste. Contacts may be in any of the Amateur bands from 3.5 to 14.4 Mc.

Full details can be obtained from A.R.A.T., Box 301, Br./U.S. Zone, F.T.T., Trieste.

AMENDMENT TO FEDERAL CONSTITUTION

Under the direction of the Federal Council of the Wireless Institute of Australia, Federal Executive has decided to amend the Constitution to alter the Federal Constitution (1947) of the W.I.A.A., as follows:

Section 28. By deleting after the word "and" in the second (2nd) line, the words "two other and including in lieu thereof, the words "four other members".

FEDERAL QSL BUREAU

RAY JONES, VK3BJ, MANAGER

Eric Macklin, ex-VK1EM of Macquarie Island a year or two back, will be making the trip to Macquarie Island this year and like us so much that he is returning and bringing his pal with him. They plan to move around most of the Eastern States including Tasmania.

ZLJAJ and ZLJMY expect to be in Australia for a couple of months commencing December next. ZLJAJ made the trip last year and like us so much that he is returning and bringing his pal with him. They plan to move around most of the Eastern States including Tasmania.

VK3IC, Willis Island—375 miles east of Cairns—has been in from Cairns on a M.C. phone, and requests QSL via W.I.A. as Willis Island gets only one mail per year—usually in June. The only human beings there are two radio men and one meteorologist. They are always glad of a call, so don't pass them up although their location doesn't count as a new country.

KC1WU, in a recent QSL to Eric BERS198, requests SWL reports on his signals. His address is Jack Youngstrom, Kussie, Caroline Islands. Jack, an American, uses a Viking transmitter and is seeking VK3 and VK7 contacts. He has already contacted all other VK districts. Jack is having his first experience of Amateur Radio while located at the Caroline.

Leo Rind, WJ4C/MM, aboard S.S. Pioneer Glen, recently in Melbourne, solicits VK QSOs. He QSLs OK with an excellent card.

Frank Anear, VK3WZ, in a letter under date of 18th July, is very pleased with a Gelofo VFO which recently came to hand, and is more than pleased with the suggestion in a recent "A.R." to substitute a BLS as late tube in place of a 6V6. He has been off the air since early May re-building the rig and using the all band final described in October, 1953, "Amateur Radio."

Details of the awards available from the Radio Club of Cuba, and the Radio Club of Costa Rica, are available from this Bureau.

On 11th July, W8AM informed writer that two W4 Amateurs were due to be in HV (Vatican) above the roof of St. Peter's Basilica, if they were successful in getting on air from that locale.

W4QWC and W4VZG were scheduled to arrive at KCA, Navassa Island—on 1st August for five days' operation. It was recently announced that KCA is regarded as a new country. It is located between Cuba and Haiti and of course is U.S.A. owned. This information also from W8AM.

Enquiries reveal that Jim Carr, ex-VK3JC, has not sent out cards because one of his youngsters has inadvertently burned the log book!

SOUTH AUSTRALIA

President: R. M. Bowen, VK3XU.
Secretary: G. G. Harris, VK3RR, Box 1234K, G.P.O., Adelaide. Telephone J 1151.

Meeting Night: Second Tuesday of each month at 17 Wymouth St., Adelaide.
Divisional Sub-Editor: W. W. Parsons, VK3PS, 10 Victoria Avenue, Rose Park.
QSL Bureau: Geo. Lusk, VK3KX, 8 Brook St., West Melbourne, South Aus. (Inwards and Outwards).

WESTERN AUSTRALIA

President: F. A. T. Tredra, VK3FT.
Secretary: J. Mead, VK3LJ, Box N1002, G.P.O., Perth.

Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
Meeting Night: Third Tuesday of the month.
Divisional Sub-Editor: D. E. Graham, VK3HK, 110 Edinburgh St., Mt. Hawthorn.
QSL Bureau: Jim Rumble, VK3HU, Box F319, Perth, West Aus. (Inwards and Outwards).

TASMANIA

President: I. K. Edwards, VK3LE.
Secretary: W. G. Tait, Box 371B, G.P.O. Hobart.

Meeting Night: First Wednesday of each month at the W.I.A. Club Room, 147 Liverpool Street, Hobart.
Divisional Sub-Editor: L. E. Edwards, VK3LE, 128 Strickland Ave., Hobart.
QSL Bureau: Ray Calvert, VK3RT, Box 371B, G.P.O. Hobart (Inwards and Outwards).
Zone Correspondents: Northern: M. A. Chapin, VK3KA, Mt. Trivallion Rd., Launceston; North Western: B. Wilson, 11 Cunningham St., Burnie, Tasmania.

NEW SOUTH WALES

The monthly meeting of the N.S.W. Division was held at Science House, Gloucester Street, Sydney, on Friday, 27th July, but unfortunately, the attendance was not as good as usual despite the efforts of Council to provide an interesting lecture.

The meeting was opened by the President, Jim Corbin, VYC, and after the usual formalities were dispensed with, the meeting was handed over to the lecturer for the evening, Mr. Michael Callaud, who gave a most informative and interesting lecture on the "Aqua Lung and Diving." Callaud gave the technical details of the Aqua Lung and recounted some of his experiences in diving both in Australian waters and also in the Mediterranean, and followed the descriptive part of his lecture with some explanatory films which gave a great insight into the work done in France in the perfection of the art. The films were a graphic representation of the inspection of the wrecks of Toulon following on World War II, and impressed most of the audience, especially the anglers who were fascinated by the fish, only to be assured that the fish in our harbour were both more sizeable and plentiful than in the Medi-

MY KYL SAYS!

WHY is it that if our hobby is purely amateur, quite a number of the boys attempt to carry on a professional conversation when on the air.

My KYL says that if a Ham is in professional radio outside his hobby, he usually tries to hide that fact when he is "hamming," but some Amateurs, possibly from an inferiority complex, keep introducing a mass of technicalities into the ragchew which at times are the source of much amusement at the other end of the conversation.

Of course my KYL is ignorant of the finer points of Amateur Radio and can be forgiven, if not silenced!

—OIGLE.

Page 17

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1371-8	200 - 220 - 230 - 240	500 - 600 - 750 - 850 - 1000	300	—
1400-19	200 - 220 - 230 - 240	565 - 500 - 425	250	2 x 6.3v.-3A.; 2 x 2.5v.-3A.; 5v.-3A.
1643-23	230	—	—	6.3v. TAP 5v.-2A. (500v. insul.)
1525-24	200 - 230 - 240	—	—	2.5v.-10A. (1000v. insul.)
1305-22	200 - 220 - 230 - 240	—	—	2.5v.-10A. (3000v. insul.)

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967-1A	35	20	150	200	1000
956-1A	30	20	200	160	1000
1011-1A	30	15	250	180	1000
*983-1A	25	20/5	30/300	90	1000
988-1A	15	10	300	80	1000

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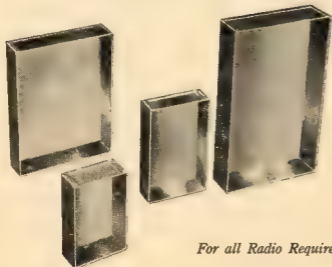
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The news of the passing of Hal SAW came as a shock to a great many of the Amateurs throughout VK and the letters and telegrams

SCF at 10 last managed to get on the air and Murray was just nicely set to work with him. He had a little power went off and stayed on for about seven or eight seconds. He heard about AlFred and the spider, or was it Bruce and the ocean. Oh, no, I am sorry, of course, I am not sure. I am not sure. Murray, little watermelons will grow again. Or should it be bananas? SXO has had a period of inactivity due to being a victim of the flu. He has been on the air for a while. EBC has been heard on 3.5 Mc. with a power of 5w, but I believe that Huggle is only using a 100 watt power. I am not sure of the arrangements for his contacts on this band. Apparently the gang are moving to this band in force judging by the call signs heard there. I have heard a lot of call signs. I am questioning 3.5 Mc. and reports hearing SBG, SJR, SAP, SFM, SLD and SMA. Tom thinks that this local group for the coming RLD Contest, but I am not sure.

who carries a chip on his shoulder for years against the W.I.A. and when asked why, just says "because I can't catch on". The Council, the members, etc. all up to the ears in hearsay, or rumour. I heard one of this ilk say on the other day on 49 mtr. he had found a station on 40 mtr. and he had found it on 40 mtr. He was asked to go and check it again and he said "I don't know". He would contact a station, and as soon as the formalities were over and done with, he would say "I don't know". He was asked to go and check it again and he said "I don't know". He had found quite a number of mistakes in it, and he wanted an up-to-date call sign book and he wanted to know what was in it. He will these characters grow up. Wouldn't it? When you realise that in trying to rubbish the W.I.A., they are only rubbishing themselves. I don't think it is a very good idea. It is a very perfect answer to the Radio Amateur's prayer, but this I do know, it is a near perfect as to get under the set-up in VK, and all those who are in the W.I.A. at times would be keeping stamps, or pressing battery wings for hobbyists. It was not

In closing these monthly notes for September it is extremely embarrassing for me to keep drawing the gentle reader's attention to the talent that exists in VKS, but did you read

Our congratulations go to both members on their informative articles.

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the Editorial by our President in last month's magazine? Not bad, did I didn't think that he had it in him. I asked Gordon if he was related to the clergyman who was walking down the aisle and tripped over his surprise, but he assured me that was not. Apparently the church organ has taught him a thing or two. Nice work Shylock, I lift my easock to you.

— —

WESTERN AUSTRALIA

At the July meeting of the Institute, members were entertained by Mal Murray, GMY, with a lecture on "Welding—Metallic and Non-metallic Welding." Mal produced quite a few samples of the three main types of welding—metallic arc, inert arc and resistance arc welding, and his talk aroused quite a deal of interest in the finer points of the art. The film "Gateway to the Heavens" followed, this covering the development of astronomy from the discovery of the telescope to modern times. Wally Coxon, GAO, concluded the evening with a short talk, "Pages from the Past"; a few anecdotes of Radio in W.A. in the days of "King Spark." He recalled the objection raised when a license was granted to a radio station in the name of an Amateur Station license. It doesn't appear that the objection was too successful—although at the time was apparently well founded, as the station was for a commercial radio station only 5-1.

The combined Annual Dinner of the Institute and the Royal Society was held in the "Marrell" in Hay Street on 23rd July. Although attendance was poor compared with previous years, those who were there voted it a "good show" and would be looking forward to the next. The Committee had organised a number of prizes and questions were asked during the moving—one of which was to guess the number of matches in a box by the rattle when same was shaken. The correct answer of one would have been a little better, as the box in fact had not been filled with small broken pieces of matchstick!

It is felt that the new Federal Contest Committee is "on the ball" this year with their clarification of Rule 5 of the R.D. Contest in the Amateur category and their new sign for contest purposes. This had been a bone of contention for some time and has caused a state of mind of bad feeling in certain quarters. Good work!

The proposal to provide an emergency network of Amateur Stations on yachts taking part in the annual Great Australian Yacht Race does not seem to have attracted many—or any takers. The gear is there for the lending, but apparently no one is interested in borrowing it to be very good sailors! Remember if you're interested, ERU, 60H or 6AG are the sub-stations who have the gear in their Attalla.

Well, the R.D. Contest has come and gone for another year, although of course as I write these notes there is still some few days to go before the event comes off. Naturally we all hope that VKR has carried the day again, and if not it certainly won't be through want of trying! But I'm not going to resort to crystal ball stuff at this stage. May the best State win!

An item of importance which should be mentioned, although somewhat belatedly, is the monthly award of the Jack House RCR, given at the Birthday Honours List. Jack was awarded an M.B.E. for his fine record of service in the Army.

6AP has been giving the locals a check on their 7 Mc. transmissions per the medium of a tape recorder. It is certainly a very handy adjustment if this facility is available. One of the inactive types, Ted 7TF, did a good job on the District Committee. 6CM, who I present here is working on the 7 Mc. so well we must put out for an airing shortly. ERU has been stoking up the Command tx on 80 mc to the tune of RFF 38 from DCHV, and too bad for 15 watts. Jim vows he is going to disconnect 6WT's and of their common 40 mc two half waves in phase and 100 watts to the 7 Mc. and 100 watts in phase in the way of an antenna. This job is strung from one station's tower to the other, but the introduction of the 7 Mc. into the phasing stub in the centre. Separate sets of feeders at each end enable either to use the 7 Mc. or the 100 watts. I don't know what would happen if both were used together! 6HR, of "Poles and Holes" fame has been with the majority of VKR's inactive of late, but I hope he will save that bean on an airing on the 14th Lev.

ERU thanked the experts by coming on 80 mc with a columnial signal. The 7 Mc. and a ZL or two in fine style then disappeared. Was that your second 80 mc x-c, QSO post-war? The 7 Mc. and a ZL or two in fine style then disappeared. Was that your second 80 mc x-c, QSO post-war? The 7 Mc. and a ZL or two in fine style then disappeared. Was that your second 80 mc x-c, QSO post-war?

230v. home generated DC and by at 400 cycles AC are all called on to power the rig. But in spite of these limitations Basil manages 90 or so watts on most bands. I believe the view from the top of his 100 ft. tower enables him to pick up landmarks 40 miles away. Maybe that's some compensation. Another with what could be a sticky power problem is 6MO, of Watherloo. 6MIL has had some trouble with the DC, but the authorities at the Magnetic Observatory did not supply rotary inverters. Associate Wally, 6ZAA, has had some trouble with the DC, but he has received signals, but the tx has been giving trouble. I think a job re-crystallisation is under way there. Well the 7 Mc. contest is over for the month. Still haven't received any gem from anybody for insertion, so apparently nothing happens here in the West.

TASMANIA

The July meeting, which was held at the Club Rooms, was one of the best attended for many months. Hardly a chair was vacant and a number of faces which had been in hiding for some time were shining brightly in the back row—notably that of TDH, nice to see you at meetings again. Dave, I don't think there is any doubt that the good attendances recently are due mainly to the excellent lectures that are being arranged by the lecture committee.

On this occasion an illustrated talk was given by Mr. George Hale, of the Tasmanian Museum Geology Section, the subject being the detection of radioactive elements in the crust covered by Hale proved himself to be thoroughly conversant with his subject and it was not until 10 p.m. that the audience was dismissed. The exhibit exhibits inspected. Actually, I have my own theories on this mineral detection business. Since the Gamma rays from the human eye are magnetic radiations, they could be detected by a receiver using the superbet principle. The line-up may be as follows: The Gamma rays would be detected in the eye. The eye would be converted to x-rays they would be converted to light rays. The L.I. channel would consist of a telescope. The L.I. channel would be necessary to place the L.I. channel to the eye to detect the radio-active minerals in the eye.

Of course some chaps may wish to go one better by using double conversion. In the 2nd mixer the light rays may be converted to radio waves by mixing with a radio wave. By using the ordinary Amateur rx to detect the radio waves in the normal way. The source of the radio waves may be a hot water bottle, Indian curry or one of TML's jokes, but now I'm getting facetious. I intend to try out this gadget in the near future. TML, as he reports hearing the same noise that comes from a very excited Geiger counter on his Attalla. I know there's something in this scientific business.

The August meeting was held at the University lecture Room at Sandy Bay and after a brief half hour of business, the meeting was addressed by TGM, Ken McCracken, who deputised for Dr. A. G. Fenton, of the Cosmic Ray Laboratory. Dr. Fenton was unfortunately not able to attend, but Ken made an excellent job of explaining the why's and wherefores of cosmic rays and the subject of the gathering moved to the Cosmic Ray Laboratory nearby, where the practical aspects of the subject were dealt with. The evening was perhaps the most interesting of any so far—it was to me anyway, and I thoroughly enjoyed myself. Supper was served by courtesy of the University.

An attempt will be made to get the new 7W1 tx and shack completed for the R.D. Contest, and by the time the contest is over, the work should be a going concern. TAL and 7TF made a survey of the aerial position and reported favourably. The 7W1 tx and shack are being built on the roof with feeders coming down the light well to the shack.

Guest lecturer, the N.T.W. Coast—glad to meet you Sam, if only per phone. Chas 7CF also a Hobart visitor from his Queenstown haunt, how did the trip go? Vanquish on the 7 Mc. and 100 watts. Chas? Ian 7KB reported buying enough gear for a small x-c. rig. I sort of hoped and thought he would have bought a 7W1 tx and 7TF building the rig into a steel cabinet—why hide all that beautiful work? Keith 7AF may now be a 7W1 tx and shack on the 7 Mc. and 100 watts. That's all for now; back to the rathouse.

NORTHERN ZONE

7RB has been heard on again lately now that the house is completed. 7XW has been doing some building in the 144 Mc. and 50 Mc. sphere and has been heard on the 7 Mc. and 100 watts on for his hidden tx. TAL lately did a good job on a more elaborate pole to complete his antenna systems and the said pole is now safely aloft with a 7W1 tx and shack on the 7 Mc. and 100 watts. Just in passing these days as building has all

his station, but 144 Mc. antenna is pointed inland-wards, though, from his new QTH 7BQ is still wrestling with crystal converts. 7TE has purchased a new coil kit for the super rx and just about 1000 yds of 100 yds of wire. 7BQ once again from the North-West Coast—good to hear you Ted.

7FM had the police down to Kelsa a few weeks ago, looking for a missing "Long wave" antenna. His fellow work associate, 7PM, did not know anything about it, but has his ve beam up in a new QTH, right on the waterfront. Great mail now, Dave, 7BQ is now a 7W1 tx, a private bag 7GM is re-building still, and the locals are listening till he breaks the ether. 7BK, our DX man, has forsaken the key for the key board and plays a merry tune at some of the local balls. As President recently, he arranged dinner suits most of us felt were at the wrong meeting until we discovered the wearer. One of our Associates, Harry Solomon, has gained a place in the horse code class of the local Technical College—"No look out ticket here I come!" Les Hodgkinson is waiting for the results of his "Limited" to arrive—his hoping.

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